

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Accutech Packaging Inc

Massachusetts Manufacturing Extension Partnership

Lean is a Big Part of the Package at Accutech

Client Profile:

Accutech Packaging, a family-owned company founded in 1986, custom designs and manufactures thermoformed plastic parts for use inside the boxes which hold products like razors, perfume, cosmetics, cell phones and medical diagnostic kits, in place. In the plastic area, they manufacture packaging for industrial, medical, retail and food applications, while the paper converting area manufactures paper mailing bags, displays and envelopes, and provides their contract packaging services. Accutech employs 35 people at its facility in Foxboro, Massachusetts.

Situation:

Accutech's co-owner and Vice President, Patrick Madigan, became interested in Lean and continuous improvement and recognized the necessity and benefit of becoming a Lean enterprise. "The entire company needs to be involved in Lean to share a culture where everyone is trying to do what they do better and as a team," he said. "We tried to incorporate some of these Lean practices and concepts into Accutech's human resources and quality manuals but knew we needed to take it much further." Glenn Gertridge, of the Massachusetts Manufacturing Extension Partnership (MassMEP), a NIST MEP network affiliate, introduced himself to Accutech and occasionally would offer Lean guidance or invite Madigan and the other company owners to Lean roundtables and public events where they could learn more about implementing Lean and hear how it had helped other companies. When Accutech decided to move forward with their own continuous improvement program, Gertridge brought in MEP's Jim Gusha to assist Accutech in submitting a grant application to help fund their Lean training, and Lead Project Manager Rick Bowie to work with them on their actual Lean deployment.

Solution:

MassMEP provided basic Lean training for all Accutech employees to familiarize them with Lean terms and tools. Everyone was also involved in 5S (Sort, Set in Order, Shine, Standardize, Sustain), Kaizen events, or problem solving exercises within particular areas of the facility. Through Value Stream Mapping (VSM) exercises, current state maps were produced and areas of waste were identified. MassMEP led 5S events to eliminate waste, clean, organize, standardize and make things visual. Through other Kaizen events, processes were studied, taken apart and rearranged for better flow and to reduce travel. Visual signals and point of use storage were incorporated and quick changeover was introduced. Set up reduction Kaizens resulted in substantial reductions in time. These processes were then carried into other areas of the factory.

Standardizing and increasing capacity - A credit card company had an important packaging line job for Accutech. Over the next couple of years, they would need to produce 600,000 booklets for the Platinum Card product. This job was a very labor intensive assembly and required that they produce 5,000 per week all year long. During Kaizens on the line, it was discovered that the employees had different methods and abilities when doing the assembly. The solution was to have those employees who were most adept at the folding and taping train the others to do it the same way, in order to

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standardize the procedure. Productivity went up so rapidly that they depleted the order. "Employees see now that better and faster is not a threat to their job -- it simply allows us to handle more work with the people we already have," said Madigan.

Thinking Lean - A particular job required that Accutech assemble four pieces for a customer. Before Lean, all the parts would have been run separately at different speeds, in succession, and then assembled. After Lean, the company dedicated one machine to run each part and set the machines slower or faster as needed, and then all at the same time. Material handling was almost eliminated, and they were able to go faster or slower as needed depending on each part. The entire process which would have taken forty hours was reduced approximately 70 percent.

Adding value for the customer - Accutech manufactures a plastic clam shell package and screw assemblies for a screw manufacturer. Through Kaizen events, this manufacturing area analyzed the way the packaging, labeling and lot coding was being done. To add value for their customer, Accutech offered to do the actual point of sale packaging as well. Now the company makes the packages, puts a set number of screws in each package along with directions and a driver, and ships the filled packages back to the customer who sends them to the retailer. Due to Lean improvements made to the layout, they are now more than 20 percent more profitable. The workers on the shop floor are able to see equal or greater output with less effort. Waste has been removed, people and materials move less, and things can be found very easily. Employees are comfortable making suggestions for improvement and now do so openly. By making changes to reduce the waste in these areas, the team was able to reduce the production time with the same number of people. Through their own continuous improvement efforts the team has been able to produce an additional 500 pieces per day.

Quick Changeover - In the manufacturing of a tray for one of their customers, Accutech was using a straight pull system which was a lot of work to manage. A Kaizen on the setup encouraged changing the tooling to quick changeover tooling, reducing the process by 2.5 hours. Visual signals tell employees what needs to be made so there is very little management for the process. People see empty spaces and know that they need to manufacture the product. It used to take about 2.5 hours for molds and another hour to dial in the new job; now the whole process is done in under an hour.

Results:

- * Increased productivity by 20 percent.
- * Increased capacity by 25 percent.
- * Reduced production time by 15 to 20 percent.
- * Reduced changeover time from 2.5 hours to less than an hour.
- * Reduced lead time by 20 percent.

Testimonial:

"I tell everyone I meet about the MassMEP and the value they have brought to Accutech."

Patrick Madigan, Co-Owner, Vice President